

STRUCTURES FOR INCREASING THE CRITICAL TEMPERATURE OF SUPERCONDUCTORS

Abstract

A method for increasing the critical temperature, T_c , of a high critical temperature superconducting (HTS) film (104) grown on a substrate (102) and a superconducting structure (100) made using the method. The HTS film has an a-b plane parallel to the surface of the substrate and a c-direction normal to the surface of the substrate. Generally, the method includes providing the substrate, growing the HTS film on the substrate and, after the HTS film has been grown, inducing into the HTS film a residual compressive strain the a-b plane and a residual tensile strain into the c-direction.